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On May 10, 2007

MORGAN, LEWIS & BOCKIUS LLP

By: Kathryn Deglantoni
Kathryn A. Deglantoni



PATENT
Attorney Docket No.: 40853-01-5138-US01
Client Reference No.: NEO00261US/371

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1654
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Shawn DeFrees, *et al.*

Application No.: 10/585,385

Filed: July 6, 2006

For: O-LINKED GLYCOSYLATION OF
PEPTIDES

Customer No.: 43850

Confirmation No.: 2546

Examiner: Not Yet Assigned

Art Unit: 1654

**INFORMATION DISCLOSURE
STATEMENT UNDER 37 CFR §1.97 and
§1.98**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/8A are being called to the attention of the Examiner. In accordance with CFR 1.98(2)(ii), copies of the U.S. patents and U.S. patent application publications are not enclosed. Copies of all other references are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

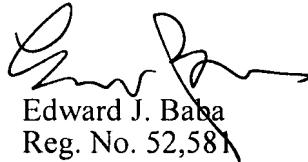
As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no

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representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

The Commissioner is authorized to deduct \$180 from the undersigned's Deposit Account No. 50-0310 since this IDS is being filed after the issuance of an Office Action. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

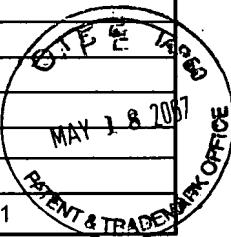
Respectfully submitted,



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ATTACHMENTS

Substitute for form 1449B/PTO				<i>Complete if Known</i>	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT					
(use as many sheets as necessary)					
Sheet	/	of	5		
				Application Number	10/585,385
				Filing Date	July 6, 2006
				First Named Inventor	DeFrees, Shawn
				Art Unit	1654
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				Attorney Docket Number	40853-01-5138-US01



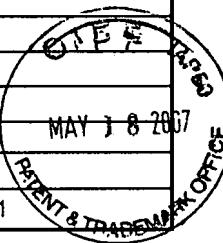
U.S. PATENT DOCUMENTS+					
Examiner Initials*	Cite No. ¹	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	US 2003/180835 A1	09/25/2003	Bayer	
	AB	US 4,412,989	11/01/1983	Iwashita, et al.	
	AC	US 4,438,253	03/20/1984	Casey, et al.	
	AD	US 4,826,945	05/02/1989	Cohn, et al.	
	AE	US 5,122,614	06/16/1992	Zalipsky	
	AF	US 5,202,413	04/13/1993	Spinu	
	AG	US 5,219,564	06/15/1993	Zalipsky, et al.	
	AH	US 5,281,698	01/25/1994	Nitecki	
	AI	US 5,324,844	06/28/1994	Zalipsky	
	AJ	US 5,410,016	04/25/1995	Hubbell, et al.	
	AK	US 5,446,090	08/29/1995	Harris	
	AL	US 5,529,914	06/25/1996	Hubbell, et al.	
	AM	US 5,605,793	02/25/1997	Stemmer	
	AN	US 5,629,384	05/13/1997	Veronese, et al.	
	AO	US 5,672,662	09/30/1997	Harris, et al.	
	AP	US 5,728,554	03/17/1998	Bayer, et al.	
	AQ	US 5,811,238	09/22/1998	Stemmer, et al.	
	AR	US 5,824,864	10/20/1998	Fox, et al.	
	AS	US 5,830,721	11/03/1998	Stemmer, et al.	
	AT	US 5,837,458	11/17/1998	Minshull, et al.	
	AU	US 5,876,980	03/02/1999	DeFrees, et al.	
	AV	US 5,922,577	07/13/1999	DeFrees, et al.	
	AW	US 5,932,462	08/03/1999	Harris, et al.	
	AX	US 6,030,815	02/29/2000	DeFrees, et al.	
	AY	US 6,348,558 B1	02/19/2002	Harris, et al.	
	AZ	US 6,376,604 B2	04/23/2002	Kozlowski	

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO				Complete if Known Application Number 10/585,385 Filing Date July 6, 2006 First Named Inventor DeFrees, Shawn Art Unit 1654 Examiner Name Not Yet Assigned	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT					
(use as many sheets as necessary)					
Sheet	2	of	5		
				Attorney Docket Number	40853-01-5138-US01



FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³	Number ⁴			
	BA	WO	87/05330	09/11/1987	Bergh, <i>et al.</i>	
	BB	WO	90/13540	11/15/1990	Enzon, Inc.	
	BC	WO	93/15189	08/05/1993	Consiglio Nazionale Delle Richerche	
	BD	WO	94/04193	03/03/1994	Enzon, Inc.	
	BE	WO	94/09027	04/28/1994	Enzon, Inc.	
	BF	WO	94/15625	07/21/1994	Enzon, Inc.	
	BG	WO	94/17039	08/04/1994	Enzon, Inc.	
	BH	WO	94/18247	08/18/1994	Enzon, Inc.	
	BI	WO	96/21469	07/18/1996	Shearwater Polymers, Inc.	
	BJ	WO	98/31826	07/23/1998	Cytel Corporation	
	BK	WO	99/14259	03/15/1999	Shearwater Polymers, Inc.	
	BL	WO	99/34833	07/15/1999	Shearwater Polymers, Inc.	
	BM	WO	99/45964	09/16/1999	Shearwater Polymers, Inc.	
	BN	WO	03/031464	A2	Neose Technologies, Inc.	

NON PATENT LITERATURE DOCUMENTS						
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
	BO	Alpin, <i>et al.</i> , "Preparation, Properties, and Applications of Carbohydrate Conjugates of Proteins and Lipids," <i>CRC Crit. Rev. Biochem.</i> , pp. 259-306 (1981)				
	BP	Bennett, <i>et al.</i> , "A Novel Human UDP-N-acetyl-D-galactosamine: Polypeptide N-Acetylgalactosaminyltransferase, GalNAc-T7, with Specificity for Partial Ga1NAc-glycosylated Acceptor Substrates," <i>FEBS Letters</i> 460:226-230 (1999)				
	BQ	Bennett, <i>et al.</i> , "Cloning of a Human UDP-N-Acetyl- α -D-Galactosamine: Polypeptide N-Acetylgalactosaminyltransferase That Complements Other GalNAc-Transferases in Complete O-Glycosylation of the MUC1 Tandem Repeat," <i>J. Biol. Chem.</i> , 273(46):30472-30481 (1998)				
	BR	Bhadra, <i>et al.</i> , "Pegnology: A Review of PEG-ylated Systems," <i>Pharmazie</i> , 57:5-29 (2002)				
	BS	Bouizar, <i>et al.</i> , "Bouizar, <i>et al.</i> , "Purification and Characterization of Calcitonin Receptors in Rat Kidney Membranes by Covalent Cross-linking Techniques," <i>Eur. J. Biochem.</i> , 155:141-147 (1986)				
	BT	Browning, <i>et al.</i> , "Studies on the Differing Effects of Tumor Necrosis Factor and Lymphotoxin on the Growth of Several Human Tumor Lines," <i>J. Immunol.</i> , 143:1859-1867 (1989)				
	BU	Chaffee, <i>et al.</i> , "IgG Antibody Response to Polyethylene Glycol-modified Adenosine Deaminase in Patients with Adenosine Deaminase Deficiency," <i>J. Clin. Invest.</i> , 89:1643-1651 (May 1992)				
	BV	Charter, <i>et al.</i> , "Biosynthetic Incorporation of Unnatural Sialic Acids Into Polysialic Acid on Neural Cells," <i>Glycobiology</i> , 10(10): 1049-1056 (2000)				

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>					
Sheet	3	of	5	Application Number	10/585,385
				Filing Date	July 6, 2006
				First Named Inventor	DeFrees, Shawn
				Art Unit	1654
				Examiner Name	Not Yet Assigned
				Attorney Docket Number	40853-01-5138-USPTO

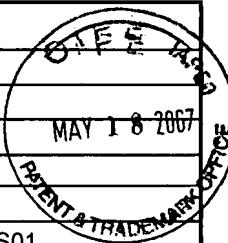
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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³	Number ⁴			
	BW	Chrisey, et al., "Covalent Attachment of Synthetic DNA to Self-assembled Monolayer Films," <i>Nucleic Acids Research</i> , 24(15):3031-3039 (1996)				
	BX	Cohn, et al., "Biodegradable PEO/PLA Block Copolymers," <i>J. Biomed. Mater. Res.</i> , 22:993-1009 (1988)				
	BY	Delgado, et al., "The Uses of Properties of PEG-Linked Proteins," <i>Critical Reviews in Therapeutic Drug Carrier Systems</i> , 9(3,4):249-304 (1992)				
	BZ	Dunn, et al., "Polymeric Drugs and Drug Delivery Systems," <i>ACS Symposium Series 469</i> , <i>American Chemical Society</i> (1991)				
	CA	Edge, et al., "Deglycosylation of Glycoproteins by Trifluoromethanesulfonic Acid," <i>Anal. Biochem.</i> , 118:131-137 (1981)				
	CB	Hagen, et al., "Cloning and Characterization of a Ninth Member of the UDP-GalNAc:Polypeptide N-Acetylgalactosaminyltransferase Family, ppGaNTase-T9," <i>J. Biol. Chem.</i> , 276(20): 17395-17404 (2001)				
	CC	Harris, Milton J., "Laboratory Synthesis of Polyethylene Glycol Derivatives," <i>Macromol. Chem. Phys.</i> , C25(3):325-373 (1985)				
	CD	Harris, Milton J., "Poly(ethylene Glycol) Chemistry; Biotechnical and Biomedical Applications," <i>Plenum Press</i> , New York (1992)				
	CE	Harris, et al., "Poly(ethylene Glycol): Chemistry and Biological Applications," <i>ACS Symposium Series No. 680</i> , American Chemical Society (1997),				
	CF	Hassan, et al., "The Lectin Domain of UDP-N-acetyl-D-galactosamine: Polypeptide N-acetylgalactosaminyltransferase-T4 Directs Its Glycopeptide Specificities," <i>J. Biol. Chem.</i> , 275:38197-38205 (2000)				
	CG	Hassan, et al., "16 Control of Mucin-Type O-Glycosylation: O-Glycan Occupancy is Directed by Substate Specificities of Polypeptide GalNAc-Transferases," <i>Carbohydrates in Chemistry and Biology</i> , Part II, Vol. 3, pp. 273-292 (2000)				
	CH	Hermanson, Greg T., "Bioconjugate Techniques," <i>Academic Press</i> , San Diego, (1996)				
	CI	Herscovics, et al., "Glycoprotein Biosynthesis in Yeast," <i>FASEB J</i> , 7:540-550 (1993)				
	CJ	Hounsell, et al., "O-linked Protein Glycosylation Structure and Function," <i>Glycoconj. J</i> , 13:19-26 (1996)				
	CK	Joshi, et al., "ATP Synthase Complex from Bovine Heart Mitochondria," <i>J. Biol. Chem.</i> , 265:14518-14525 (1990)				
	CL	Jung, et al., "Crosslinking of Platelet Glycoprotein Ib by N-Succinimidyl(4-Azidophenyl)dithio) Propionate and 3,3'-Dithiobis (Sulfosuccinimidyl Propionate)," <i>Biochimica et Biophysica Acta</i> , 761:152-162 (1983)				

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(use as many sheets as necessary)					
Sheet	4	of	5		
ATTORNEY DOCKET NUMBER 40853-01-5138-US01					

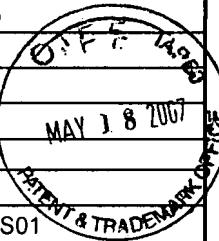
FOREIGN PATENT DOCUMENTS						T 6	
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		Country Code ³	Number ⁴				
	CM	Katre, et al., "Chemical Modification of Recombinant Interleukin 2 by Polyethylene Glycol Increases Its Potency in the Murine Meth A Sarcoma Model," <i>Proc. Natl. Acad. Sci. USA</i> , 84:1487-1491 (March, 1987)					
	CN	Keana, et al., "New Reagents for Photoaffinity Labeling: Synthesis and Photolysis of Functionalized Perfluorophenyl Azides," <i>J. Org. Chem.</i> , 55:3640-3647 (1990)					
	CO	Keppler, et al., "Biochemical Engineering of the N-acyl Side Chain of Sialic Acid: Biological Implications," <i>Glycobiology</i> , 11(2):11R-18R (2001)					
	CP	Kitamura, et al., "Polyethylene Glycol Modification of the Monoclonal Antibody A7 Enhances its Tumor Localization," <i>Biochem. Biophys. Res. Commun.</i> , 171(3):1387-1394 (9/28/1990)					
	CQ	Kodama, et al., "Synthesis of UDP-6-Deoxy- and -6-Fluoro-D-galactoses and Their Enzymatic Glycosyl Transfer to Mono-and Biantennary Carbohydrate Chains," <i>Tetrahedron Lett.</i> 34(40):6419-6422 (1993)					
	CR	Kornfield, et al., "Assembly of Asparagine-linked Oligosaccharides," <i>Ann Rev Biochem</i> , 54:631-664 (1985)					
	CS	Kukuruzinska, et al., "Protein Glycosylation in Yeast: Transcript Heterogeneity of the ALG7 Gene," <i>Proc. Natl. Acad. Sci. USA</i> , 84:2145-2149 (1987)					
	CT	Langer, Robert, "New Methods of Drug Delivery," <i>Science</i> , 249:1527-1533 (1990)					
	CU	Lougheed, et al., "Glycosyl Fluorides Can Function as Substrates for Nucleotide Phosphosugar-dependent Glycosyltransferases," <i>J. Biol. Chem.</i> , 274:37717-37722 (1999)					
	CV	Müller, et al., "Localization of O-Glycosylation Sites on Glycopeptide Fragments from Lactation-associated MUC1," <i>J. Biol. Chem.</i> , 272:24780-24793 (1997)					
	CW	Müller, et al., "High Density O-Glycosylation on Tandem Repeat Peptide from Secretory MUC1 of T47D Breast Cancer Cells," <i>J. Biol. Chem.</i> , 274:18165-18172 (1999)					
	CX	Park, et al., "Characterization of the Cell Surface Receptor for a Multi-lineage Colony-stimulating Factor (CSF-2α)," <i>J. Biol. Chem.</i> , 261:205-210 (1986)					
	CY	Pyatak, et al., "Preparation of a Polyethylene Glycol: Superoxide Dismutase Adduct, and an Examination of its Blood Circulating Life and Anti-Inflammatory Activity," <i>Res. Commun. Chem. Pathol. Pharmacol.</i> , 29(1):2-16 (July 1980)					
	CZ	Scouten, William H., "[2] A Survey of Enzyme Coupling Techniques," <i>Methods in Enzymology</i> , 135:30-65 (1987)					
	DA	Shen, et al., "Cis-aconityl Spacer Between Daunomycin and Macromolecular Carriers: A Model of pH-Sensitive Linkage Releasing Drug From a Lysosomotropic Conjugate," <i>Biochem. Biophys. Res. Commun.</i> , 102(3):1048-1054 (10/15/81)					
	DB	Sojar, et al., "A Chemical Method for the Deglycosylation of Proteins," <i>Arch. Biochem. Biophys.</i> , 259(1):52-57 (1987)					

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		Country Code ³	Number ⁴			
	DC	Stemmer, Willem P. C., "Rapid Evolution of a Protein <i>in vitro</i> by DNA Shuffling," <i>Letters to Nature</i> , 370:389-391 (1994)				
	DE	Stemmer, William P. C., "DNA Shuffling by Random Fragmentation and Reassembly: <i>In vitro</i> Recombination for Molecular Evolution," <i>Proc. Natl. Acad. Sci. USA</i> , 91:10747-10751 (Oct. 1994)				
	DF	Takeda, et al., "GPI-anchor Biosynthesis," <i>Trends Biochem. Sci.</i> , 20:367-371 (1995)				
	DG	Tanner, et al., "Protein Glycosylation in Yeast," <i>Biochim. Biophys. Acta.</i> , 906:81-91 (1987)				
	DH	Tenno, et al., "The Lectin Domain of UDP-GalNAc: Polypeptide N-Acetylgalactosaminyltransferase 1 is Involved in O-Glycosylation of a Polypeptide with Multiple Acceptor Sites," <i>J. Biol. Chem.</i> , 277(49):47088-47096 (2002)				
	DI	Thotakura, et al., "[28] Enzymatic Deglycosylation of Glycoproteins," <i>Meth. Enzymol.</i> , 138:350-359 (1987)				
	DJ	Udenfriend, "How Glycosyl-phosphatidylinositol-anchored Membrane Proteins are Made," <i>Ann. Rev. Biochem.</i> , 64:593-591 (1995)				
	DK	Veronese, et al., "Surface Modification of Proteins: Activation of Monomethoxy-polyethylene Glycols by Phenylchloroformates and Modification of Ribonuclease and Superoxide Dismutase," <i>App. Biochem. Biotech.</i> , 11:141-152				
	DL	Vocadlo, et al., "Glycosidase-catalysed Oligosaccharide Synthesis," <i>Carbohydrates in Chemistry and Biology</i> , Part I, Vol. 2, pp. 723-844 (2000)				
	DM	Wong, et al., "Chemical Crosslinking and the Stabilization of Proteins and Enzymes," <i>Enzyme Microb. Technol.</i> , 14:866-874 (1992)				
	DN	Yamada, et al., "Selective Modification of Aspartic Acid-101 in Lysozyme by Carbodiimide Reaction," <i>Biochemistry</i> , 20:4836-4842 (1981)				
	DO	Younes, et al., "Morphological Study of Biodegradable PEO/PLA block Copolymers," <i>J. Biomed. Mater. Res.</i> , 21:1301-1316 (1987)				
	DP	Zalipsky, Samuel, "Functionalized Poly(ethylene glycol) for Preparation of Biologically Relevant Conjugates," <i>Bioconjugate Chem.</i> , 6:150-165 (1995)				
	DQ	Zarling, et al., "Mapping of Lymphocyte Surface Polypeptide Antigens by Chemical Cross-linking with Biotin," <i>J. Immunol.</i> , 124(2):913-920 (1980)				

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